

THE NATIONAL MEDICAL REVIEW.

REPORT OF COMMITTEE ON "THE RESTRICTION AND PREVENTION OF TUBERCULOSIS."

Your committee, appointed for the purpose of reporting on what measures, if any, can be taken by this Society for the prevention and restriction of tuberculosis, beg leave to report as follows:

It has been proven beyond a doubt that consumption is a disease which is communicable from man to man, from man to animals and from animals to man. The agent which conveys the disease, the bacillus tuberculosis, may enter the system through the lungs, the stomach or some other absorbing surface. Every existing case must arise from some other pre-existing case.

Based upon these facts it follows that consumption is a *preventable disease*. In fact, it appears that there is no other disease known which is more easily prevented than this. The power of man to control the spread of the disease is *absolute* when he himself is the victim.

Your committee scarcely believes it necessary to report in this communication upon the terrible ravages of this disease. Yet it might be well to call attention to a few facts. From July 1860, to April, 1892, there were 76,272 deaths from consumption in the city of Philadelphia alone. In Vermont one death in every five is due to consumption; while the rate is nearly as high in the other New England States. Throughout the whole world one death in every seven is due to consumption. Dr. Biggs of the New York City Health Department found evidences of the existence of tubercular disease in more than 60 per cent of the autopsies in the charity hospitals. Over 2,000 children under two years of age die annually in Paris of tuberculosis. In Michigan there are about 3,000 deaths annually from this disease. One writer declares that "probably 5,000,000 people die annually throughout the world from tuberculosis." The editor of the *Record* says that "consumption kills twelve per cent of the population." In a report recently issued by the Health Department of New York City is the statement that "consumption causes about one-fourth of all the deaths occurring in the human being

during adult life and more than one-half of the entire adult population at some time in life acquires it." And yet this is most decidedly a preventable disease.

The following statement of mortality from tuberculosis in the District of Columbia, for ten years, 1883-1892 inclusive, by sex, color and with percentages, has been prepared by the Health Office:

Years.	Total deaths from tuberculosis.	White—Males.	White—Females.	Colored—Males.	Colored—Females.	Per cent to deaths from all causes.	Ratio to each 1,000 population, whites.	Ratio to each 1,000 population, colored.	Deaths from all causes.
1883	763	168	181	186	228	17.80	2.66	6.31	4,286
1884	856	204	101	195	266	17.77	3.02	6.65	4,814
1885	820	199	189	203	229	16.41	2.96	6.23	4,998
1886	836	185	180	210	261	17.89	2.69	6.82	4,674
1887	782	199	178	185	220	16.77	2.69	5.79	4,665
1888	745	175	189	141	240	14.85	2.43	5.08	5,040
1889	761	174	159	205	223	14.76	1.96	5.35	5,152
1890	803	198	165	222	217	14.44	2.16	5.49	5,564
1891	826	199	184	224	219	14.46	2.23	5.55	5,720
1892	827	205	184	222	216	13.56	2.22	5.15	6,098
T'ls.	8,019	1,906	1,801	1,993	2,319	...	...	...	51,011
Avg	...	...	...	...	...	15.87	2.50	5.84	...

Whites—3,707.

Colored—4,312.

Per cent of deaths from tuberculosis to all deaths 15.87 in ten years.

As the successful treatment of tuberculosis depends largely upon the early diagnosis of the disease; as said diagnosis is now readily made by a microscopical examination of the sputa; and as not all physicians have the necessary outfit to make this examination, your committee trusts that some one of the laboratories of this city will open its doors for the free examination of all suspected cases or specimens which the physicians of the District may refer to them. We understand that this free examination of the sputa is now offered to the profession of New York City.

That the disease is very prevalent among cattle is now proven beyond question. The statement is made that the number of animals infected with tuberculosis exceeds all other diseases put



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together. In Massachusetts the proportion of cows afflicted with tuberculosis is about 4 per cent. In one district in Scotland $22\frac{1}{2}$ per cent of the cattle have been found to be tuberculous.

From a letter received from Prof. A. E. de Schweinitz of the Biochemic Laboratory of the Agricultural Department we learn that two herds have been examined in the District of Columbia and were found to be badly diseased. He says it is probable that the cattle all over the country are to a greater or less extent affected with tuberculosis. Professor de Schweinitz makes the startling statement that "in nearly all cases where the disease has been discovered, from 50 to 70 per cent of the whole herd has been found infected." He also says that although the milk from tuberculous cattle may not necessarily contain the germ of the disease, yet, even in its absence the milk from such animals has been found very injurious to young children and the sick. He also says that the Board of Health of this district is in sympathy with the work of the Bureau of Animal Industry and that arrangements are now being made which will result in a systematic investigation to determine the presence of tuberculosis.

Mr. Frijs of Copenhagen, in a recent article, says that in a lot of 30 cows, from which the milk was regularly sold, he found nearly all diseased. He believes the danger of infection through milk to be so great that there is no safety except in avoiding the use of milk which has not been submitted to a temperature sufficient to destroy the tubercle bacilli. When we consider that the milk from one infected animal is likely to be mixed with the milk from the whole herd, it follows that by the use of the milk from one large dairy, hundreds of children may be exposed to tuberculosis.

In England the Department of Agriculture, under the Pleuro-Pneumonia act in 1891, slaughtered some 12,000 animals, and an examination showed 16.09 per cent of the cows, 1.53 per cent of the bulls, 2.77 per cent of other cattle and 1.2 per cent of those under one year to be affected with tuberculosis. In Denmark the disease is most common. Dr. Bang, chief veterinary officer of the

Royal Agricultural College, found 80 per cent of the cows suffering from it in some degree. In Germany, where the inspection is very strict, in two years 26,352 tuberculous animals were found among those brought to be slaughtered. In Russia tuberculosis is widely prevalent in the herds. It is a peculiarity also of the disease that it is most prevalent among the better class of stock, and where extra care is devoted to dairying.

While tuberculous meat and milk may be one important source of danger, yet, as a rule, *the* important source is from man himself. We know that the breath of tubercular patients is not an element of danger, neither is the moist sputum. The great source of danger lies in the dried sputum. The expectorated matter of tubercular patients lodges where it afterward dries, becomes pulverized, floats in the air as dust, and as such is inhaled. Or the sputum may become dry on handkerchiefs, or articles of the wearing apparel. It has been proved that the sputum may dry upon the lips of the infected person, as after wiping the lips with a handkerchief in which has been placed some expectorated matter, or simply dry on the lips as the infected matter passed over them in process of expectoration. Remaining on the lips in this way the germs are easily transferred to the lips of another by kissing, etc.. But it must be distinctly understood that the moist sputum is free from danger. From this it is readily seen how, if it were only possible to destroy all discharges from the mouth immediately after their exit, by far the greatest danger of communication from man to man would be prevented. In fact, it would probably reduce the number of cases of this disease at once to a most gratifying extent.

The consumptive patient does not understand that he is constantly re-infecting himself. He either swallows some of the matter from the lungs, thus exposing himself to tuberculosis of the abdominal organs, or, by not destroying the sputum, is surrounding himself with the infected dust to be inhaled with the air. It follows then that the consumptive must disinfect his own sputa for his own protection, as well as for the pro-

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tection of those about him. The public should be taught that *disinfection of the sputa is the great desideratum*.

But it must not be forgotten that something besides the tubercle bacillus is necessary in order that a case of tuberculosis be developed. There must be a suitable soil for the reception of these bacilli. While it is doubtful if tuberculosis is truly hereditary, at least to any great extent, yet there is no doubt that a predisposition to the disease can be inherited. We believe this predisposition is greatly augmented by the intermarriage of tubercular persons, as the offspring from such marriages would present the conditions necessary for the successful development of the disease. And while we are aware such marriages cannot be forbidden by law, yet we believe if the laity understood these facts and if the profession would use its influence to discourage these unions, the number of such marriages would be greatly reduced.

With respect to the establishment of special hospitals for consumptives, your committee would call attention to the valuable lesson taught us by England. In 1890 there were 7,000 free beds in these consumptive hospitals. The growth of these institutions during the past forty years demonstrates that as the accommodations for the consumptive poor have increased, so in a relative proportion has there been a reduction in the rate of mortality. Dr. Detweiler at Falkenstein has treated 600 cases of consumption at his private sanitarium, with the result that there has been a decided and lasting gain in 81 per cent. It is hardly possible to estimate the protection afforded a community and the wealth added to the State by this isolation of the afflicted and cure of the diseased, as a result of the existence of these special hospitals.

In view of the fact that tuberculosis is a communicable disease; that it is the most prevalent of all diseases; that it causes more deaths than any other disease; and that it is preventable by sim-

ple and easily applied measures, your committee would recommend the following:

First. That a committee be appointed to prepare the MS. for circulars or pamphlets, with the view of having the same distributed among the people setting forth the facts that each person having consumption is a constant source of danger to others not thus afflicted; that the disease is curable; and, above all, that it is easily preventable.

Second. That the hospital authorities be urged to set apart certain wards for the exclusive use of consumptives; although your committee believes that special hospitals for this purpose are preferable.

Third. That physicians be especially requested to inform their consumptive patients of the necessity of thorough disinfection of the sputa, and of the methods by which this can be accomplished; and further, that they insist that the rooms once occupied by consumptives be thoroughly disinfected before they are again inhabited.

Fourth. And that this Society take such action as will best procure the enactment of a law whereby no milk can be offered for sale in this city until the cows from which said milk was taken have been tested and found to be free from tuberculosis.

Signed by the committee.

CHAS. H. STOWELL,
J. H. BRYAN,
E. A. BALLOCH.

Dr. McArdle offered the following amendment, which, by a vote of the Society, was ordered added to the above recommendations:

Furthermore, that the Health Officer of the District of Columbia shall be requested to formulate such regulations as will insure to all persons purchasing vaccine virus in this District, a guarantee that the animals whence such material has been obtained were treated with tuberculin and proven free from tuberculosis.

